

AMENDMENTS TO THE CLAIMS

1. (Currently amended, withdrawn with traverse) A method for manufacturing an electronic module, the method comprising:

taking a conductive layer;

taking a component, which has a contact surface, which has contact zones;

gluing the component, from the side of the contact surface, to the first surface of the conductive layer;

making an insulating-material layer, which surrounds the component glued to the conductive layer, on the first surface of the conductive layer;

making feed-throughs for connecting the contact zones of the component electrically to the conductive layer; and

making conductive patterns from the conductive layer.

2. (Currently amended, withdrawn with traverse) A method according to Claim 1, ~~in which, when~~wherein gluing the component further comprises:

spreading an adhesive layer ~~is spread~~ on the surface of the conductive layer; and

pressing the contact surface of the component ~~is pressed~~ into the adhesive layer.

3. (Currently amended, withdrawn with traverse) A method according to Claim 1, ~~in which, when~~wherein gluing the component further comprises:

spreading adhesive layers ~~are spread~~ on the contact surface of the component and the first surface of the conductive layer; and

pressing the adhesive layers ~~are pressed~~ against each other.

4. (Currently amended, withdrawn with traverse) A method according to Claim 2 or 3, ~~in which~~wherein at least one component is glued to the conductive layer and an adhesive layer is spread on areas of the surface of the conductive layer, in such a way that the surface of the

conductive layer is essentially free of adhesive outside of the connection zones of the components.

5. (Currently amended, withdrawn with traverse) A method according to Claim 1, ~~in which, when~~wherein gluing the component further comprises:

spreading an adhesive layer ~~is spread~~ on the contact surface of the component; and

pressing the adhesive layer on the surface of the component ~~is pressed~~ against the conductive layer.

6. (Currently amended, withdrawn with traverse) A method according to ~~any of~~ Claims 1 ~~—5, in which~~further comprising

making at least one alignment mark ~~is made~~ on the conductive layer, for the alignment of a component, ~~and~~such that the component is glued to the conductive layer, aligned relative to the at least one alignment mark.

7. (Currently amended, withdrawn with traverse) A method according to Claim 6, ~~in which~~wherein the at least one alignment mark ~~is~~comprises a through hole, which penetrates the conductive layer.

8. (Currently amended, withdrawn with traverse) A method according to ~~any of~~ Claims 1 ~~—7, in which~~wherein making conductive patterns ~~are made~~ from the conductive layer ~~by~~comprises removing part of the material of the conductive layer, so that the remaining material forms the conductive patterns.

9. (Currently amended, withdrawn with traverse) A method according to ~~any of~~ Claims 1 ~~—8, in which~~further comprising making openings ~~are made~~ in the conductive layer and the adhesive layer at the position of the contact zones of the component, in order to form feed-throughs.

10. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—9, in which~~further comprising attaching a support layer ~~is attached~~ to the conductive layer, ~~and wherein the support layer~~ is removed after the manufacture of the insulating-material layer, but before the manufacture of the conductive patterns.

11. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—10, in which~~wherein the insulating-material layer surrounding the component is manufactured by attaching an insulating-material layer, in which recesses or cavities for a component or components have been made, to the conductive layer.

12. (Currently amended, withdrawn with traverse) A method according to Claim 11, ~~in which further comprising attaching~~ a second insulating-material layer, which is unified and which covers the component, ~~is attached~~ to the surface of the first insulating-material layer attached to the conductive layer.

13. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—12, in which~~further comprising manufacturing a second conductive-pattern layer is ~~manufactured~~ on the opposite surface of the insulating-material layer.

14. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—13, in which~~further comprising gluing a separate component, which is not connected to a circuit-board structure, ~~is glued~~ to the conductive layer.

15. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—14, in which~~wherein more than one component is embedded in the electronic module in a corresponding manner.

16. (Currently amended, withdrawn with traverse) A method according to Claim 15, ~~in which~~wherein the components embedded in the base are connected electrically to each other, in order to form a functional totality.

17. (Currently amended, withdrawn with traverse) A method according to ~~any of Claims 1—16, in which~~wherein a first module is manufactured along with at least one second module and the manufactured modules are attached to each other one on top of the other, so that the modules are aligned relative to each other.

18. (Currently amended, withdrawn with traverse) A method according to Claim 17, ~~in which~~wherein holes for feed-throughs are made through the modules that are attached on top of each other and conductors are made in the holes thus created, in order to connect the electronic circuits on each of the modules to each other to form a functional totality.

19. (Currently amended) An electronic module, ~~which includes~~the module comprising:
an insulating-material layer, which has a first surface and a second surface;
at least one hole or recess in the insulating-material layer, which opens out onto the first surface;

at least one component inside the at least one hole or recess, ~~which~~wherein the component includes contact zones on ~~that the~~the side of the component that faces the first surface of the insulating-material layer, and ~~which~~further wherein the component is positioned in such a way that the contact zones are located at a specified distance from the level of the first surface of the insulating-material layer;

a conductive-pattern layer, which runs on the first surface of the insulating-material layer and extends on top of the at least one hole or recess in the insulating-material layer and at the location of the contact zones of the components;

a hardened adhesive layer in the hole or recess in the insulating-material layer, between the component and the conductive layer; and

conductive-material formations penetrating the adhesive layer, for forming an electrical contact between the conductive-pattern layer and the contact zones of the component.

20. (Currently amended) An electronic module according to Claim 19, ~~in which~~ wherein the thickness of the component is less than the thickness of the insulating-material layer in the direction between the first surface and the second surface of the insulating-material layer.

21. (Currently amended) An electronic module according to Claim 19 ~~or 20~~, ~~in which~~ wherein the ~~said~~ conductive-pattern layer is substantially flat, so that the surface of the conductive-pattern layer that lies against the insulating-material layer, and the hole or recess in the insulating-material layer for the component, is located entirely at substantially the level of the first surface of the insulating-material layer.

22. (Currently amended) An electronic module according to ~~any of Claims 19–21~~, ~~which includes~~ further comprising a second conductive-pattern layer, which runs on the second surface of the insulating-material layer.

23. (Currently amended) An electronic module according to ~~any of Claims 19–22~~, ~~which includes~~ further comprising several components, which are connected electrically to each other by means of conductive patterns, in such a way that the components form a functional totality.

24. (New) An electronic module according to Claim 22, wherein the insulating-material layer is a unified and tight layer of polymer between the conductive-pattern layer and the second conductive-pattern layer and around the at least one component.

25. (New) An electronic module according to Claim 24, wherein the polymer is epoxy.

26. (New) An electronic module according to Claim 25, wherein the insulating-material layer includes at least one layer of glass-fibres inside the layer of epoxy.

27. (New) An electronic module according to Claim 26, wherein at least one of said at least one layer of glass-fibres comprises a hole made for the at least one component.

28. (New) An electronic module according to Claim 26, wherein at least one of said at least one layer of glass-fibres extends between the at least one component and the second conductive-pattern layer.

29. (New) An electronic module according to Claim 19, wherein the insulating-material layer comprises at least one glass-fibre mat and a layer of epoxy tightly surrounding said at least one component and said at least one glass-fibre mat.

30. (New) An electronic module according to Claim 19, wherein the insulating-material layer comprises epoxy and at least one glass-fibre mat having at least one hole for the at least one component.

31. (New) An electronic module according to Claim 30, wherein the at least one component is located in the at least one hole in the glass-fibre mat and the epoxy fills the at least one hole in the glass-fibre mat around the component.

32. (New) An electronic module according to Claim 30, wherein the epoxy forms a unified layer fastening the at least one glass-fibre mat and the at least one component in the electronic module.